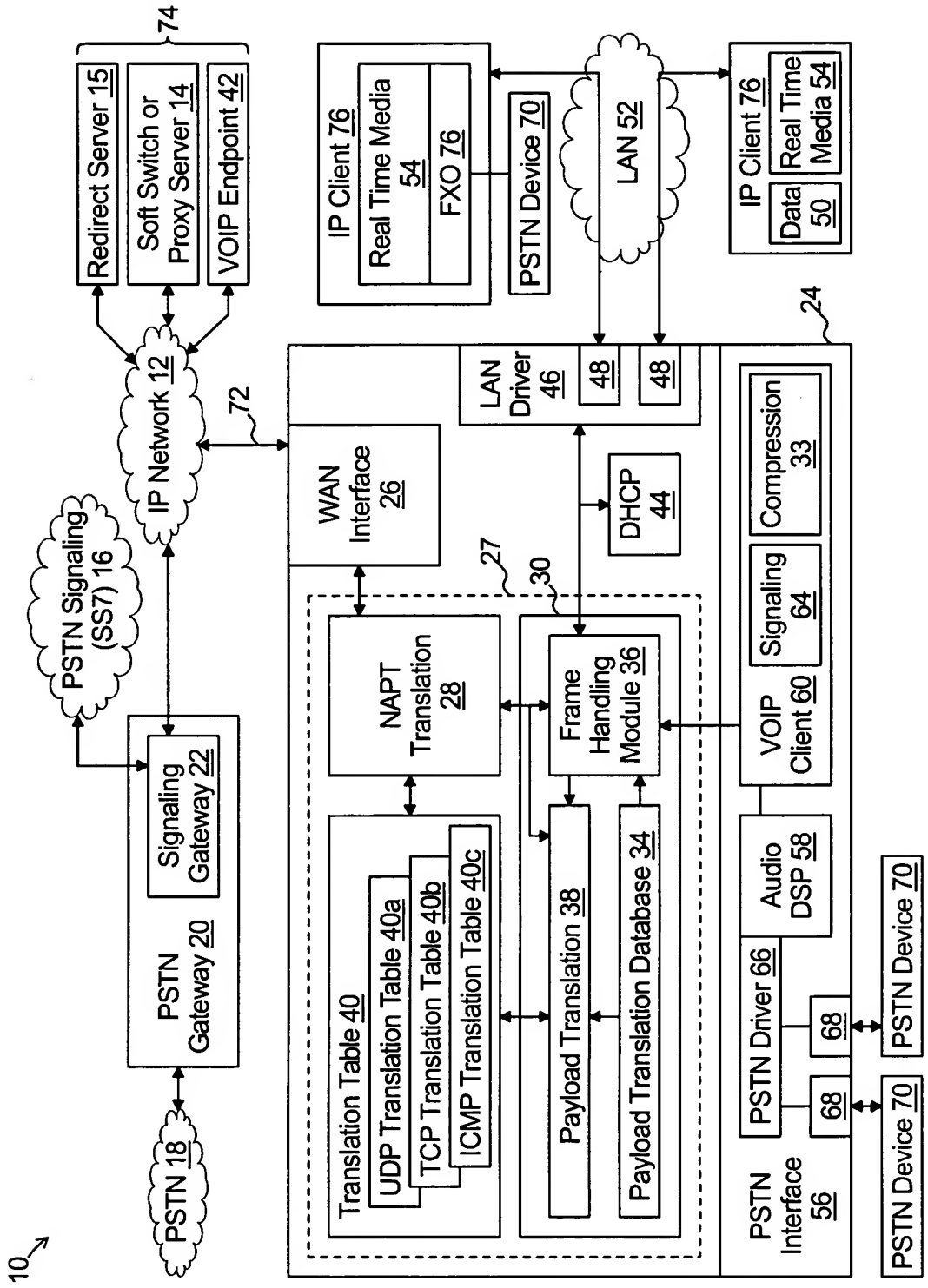
10
PSTN 18
PSTN Gateway 20
Signaling Gateway 22
PSTN Signaling (SS7) 16
IP Network 12
72
74
Redirect Server 15
Soft Switch or Proxy Server 14
VOIP Endpoint 42
WAN Interface 26
IP Client 76
Real Time Media 54
FXO 76
PSTN Device 70
LAN 52
IP Client 76
Data 50
Real Time Media 54
24
LAN Driver 46
48
48
DHCP 44
27
30
NAPT Translation 28
Frame Handling Module 36
Translation Table 40
UDP Translation Table 40a
TCP Translation Table 40b
ICMP Translation Table 40c
Payload Translation 38
Payload Translation Database 34
VOIP Client 60
Signaling 64
Compression 33
PSTN Interface 56
PSTN Driver 66
Audio DSP 58
68
68
PSTN Device 70
PSTN Device 70

Figure 1

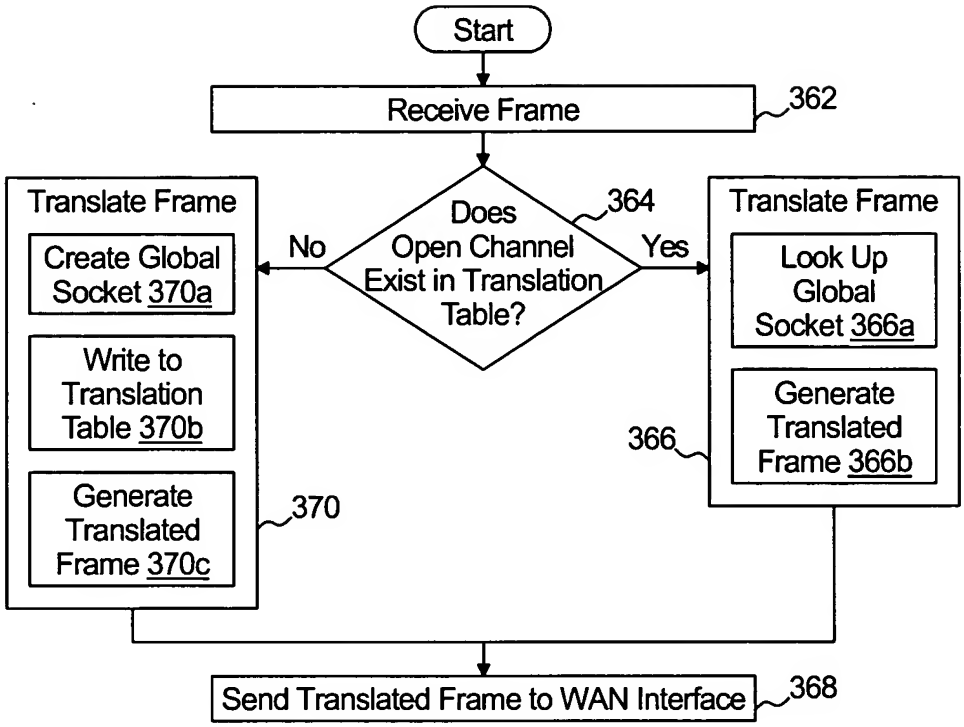

Figure 2a

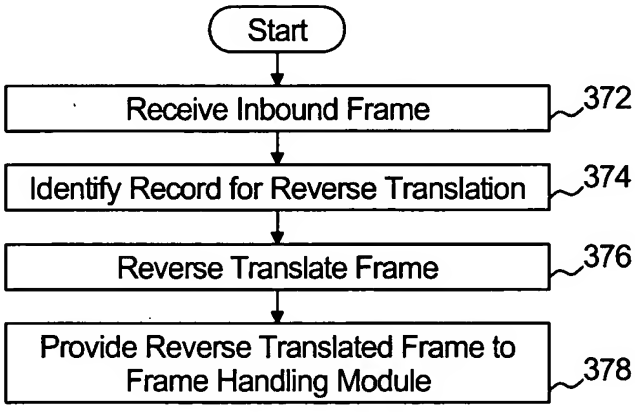

Figure 2b

UDP Translation Table 40a					
Index Record 340	Local Socket Information 342		Global Socket Information 344		Time Out 362
	Source IP Address 346	Source Port 348	Gateway IP Address 354	Port 356	
1	114	136	156	166	
2	114	112	156	158	
3	114	126	156	164	
4					
5					

Figure 3

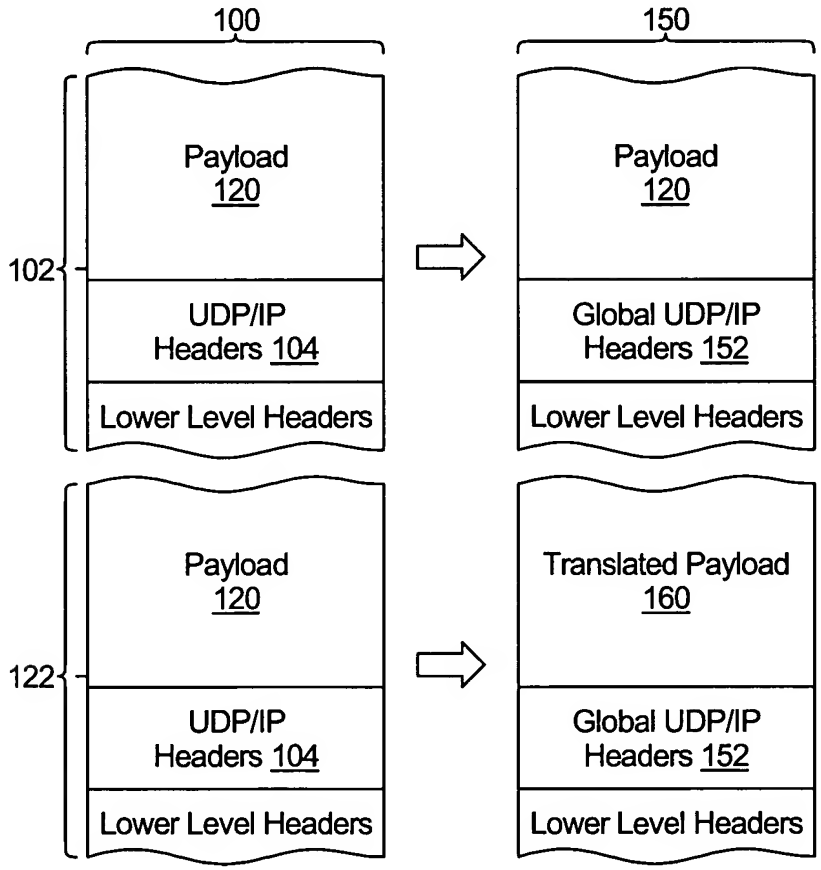

Figure 4

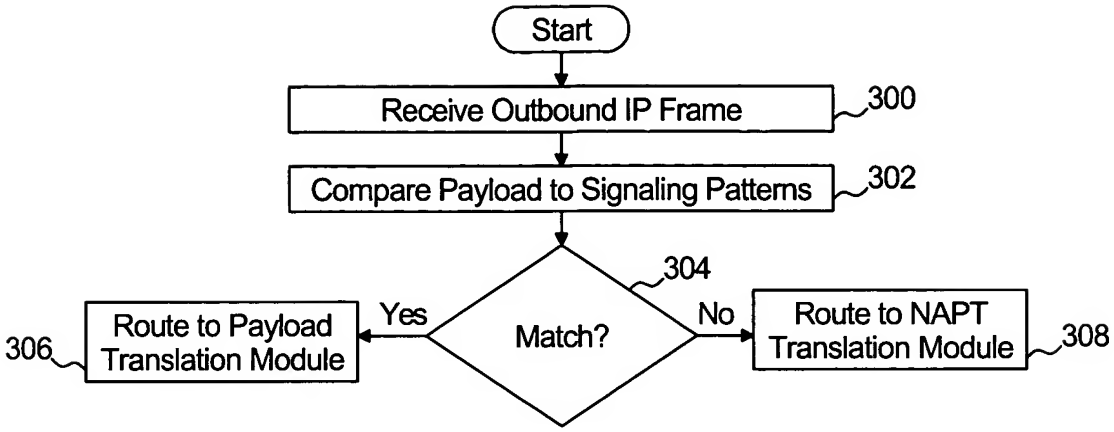

Figure 5

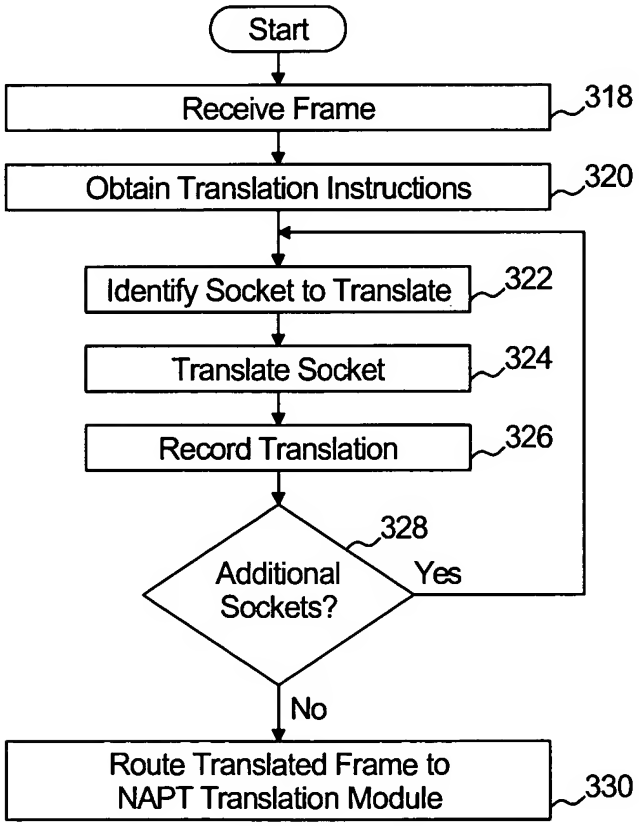

Figure 7

Payload Translation Database 34			
Protocol 310	Message 312	Signaling Frame Patterns 314	Instructions 315
SIP	Invite	ASCII Invite Headers	Translate Signaling Contact Socket 124, VIA Socket 133, Media Session Socket 127
	OK Response	ASCII OK Response Headers	Translate SDP Socket
	Register	ASCII Register Headers	Translate Signaling Contact Socket 124
	Other SIP	ASCII Applicable Headers	Translate . . .
MGCH	Message 1	Pattern Message 1	
	Message 2	Pattern Message 2	
	Message 3	Pattern Message 3	
H.323	Message 1		
	Message 2		
	Message 3		
Other Protocols	Message 1		
	Message 2		
	Message 3		

Figure 6

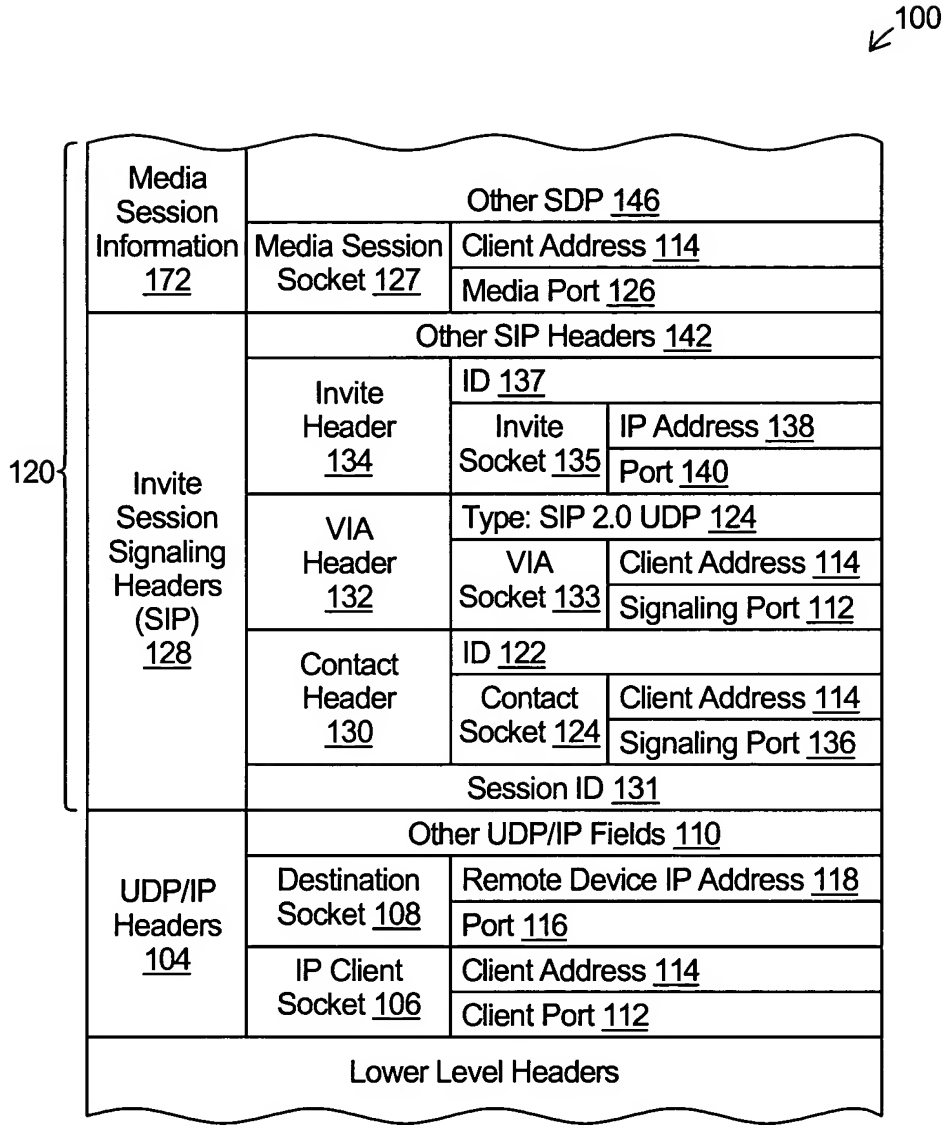
100
120
Media Session Information 172
Other SDP 146
Media Session Socket 127
Client Address 114
Media Port 126
Invite Session Signaling Headers (SIP) 128
Other SIP Headers 142
Invite Header 134
ID 137
Invite Socket 135
IP Address 138
Port 140
VIA Header 132
Type: SIP 2.0 UDP 124
VIA Socket 133
Client Address 114
Signaling Port 112
Contact Header 130
ID 122
Contact Socket 124
Client Address 114
Signaling Port 136
Session ID 131
UDP/IP Headers 104
Other UDP/IP Fields 110
Destination Socket 108
Remote Device IP Address 118
Port 116
IP Client Socket 106
Client Address 114
Client Port 112
Lower Level Headers

Figure 8a

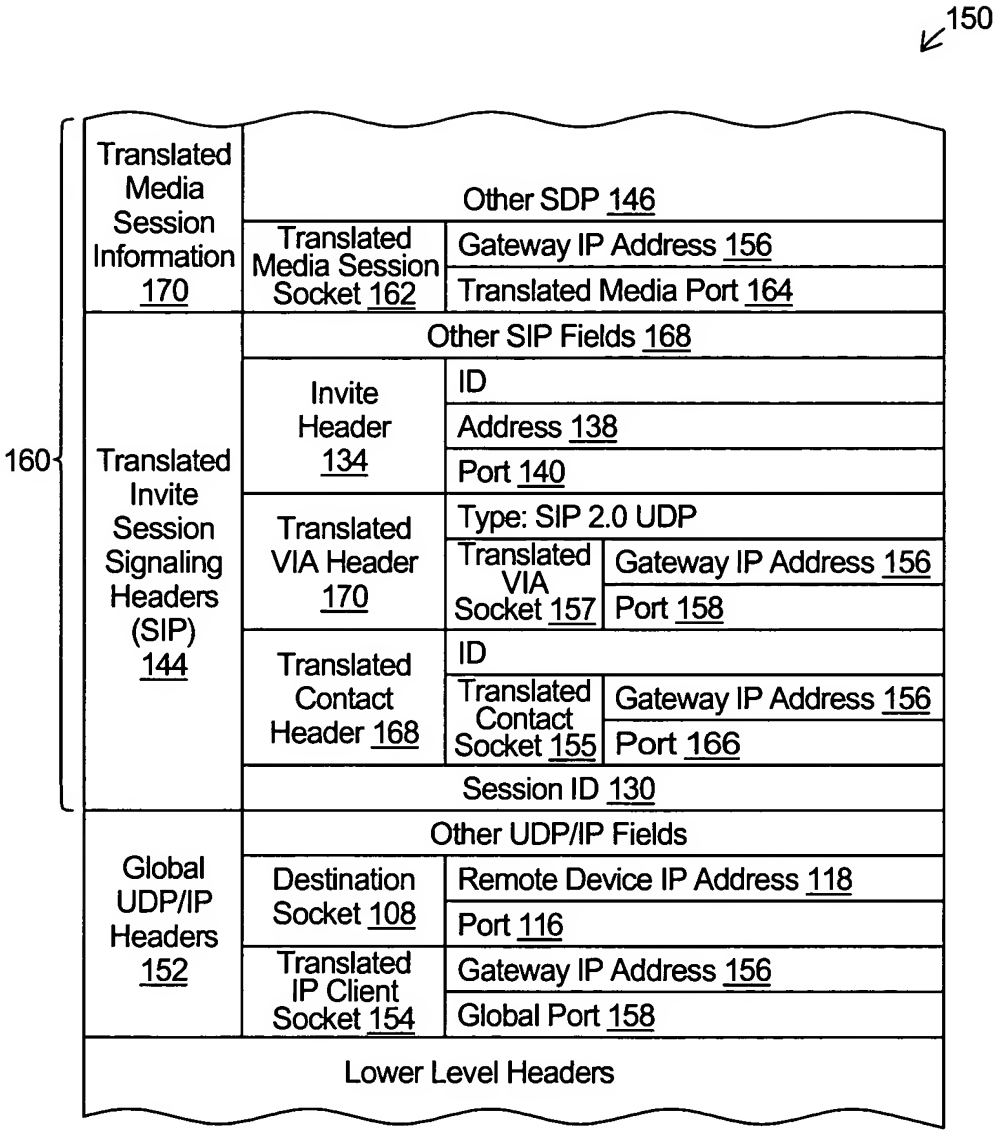
150
160
Translated Media Session Information 170
Other SDP 146
Translated Media Session Socket 162
Gateway IP Address 156
Translated Media Port 164
Translated Invite Session Signaling Headers (SIP) 144
Other SIP Fields 168
Invite Header 134
ID
Address 138
Port 140
Translated VIA Header 170
Type: SIP 2.0 UDP
Translated VIA Socket 157
Gateway IP Address 156
Port 158
Translated Contact Header 168
ID
Translated Contact Socket 155
Gateway IP Address 156
Port 166
Session ID 130
Global UDP/IP Headers 152
Other UDP/IP Fields
Destination Socket 108
Remote Device IP Address 118
Port 116
Translated IP Client Socket 154
Gateway IP Address 156
Global Port 158
Lower Level Headers

Figure 8b

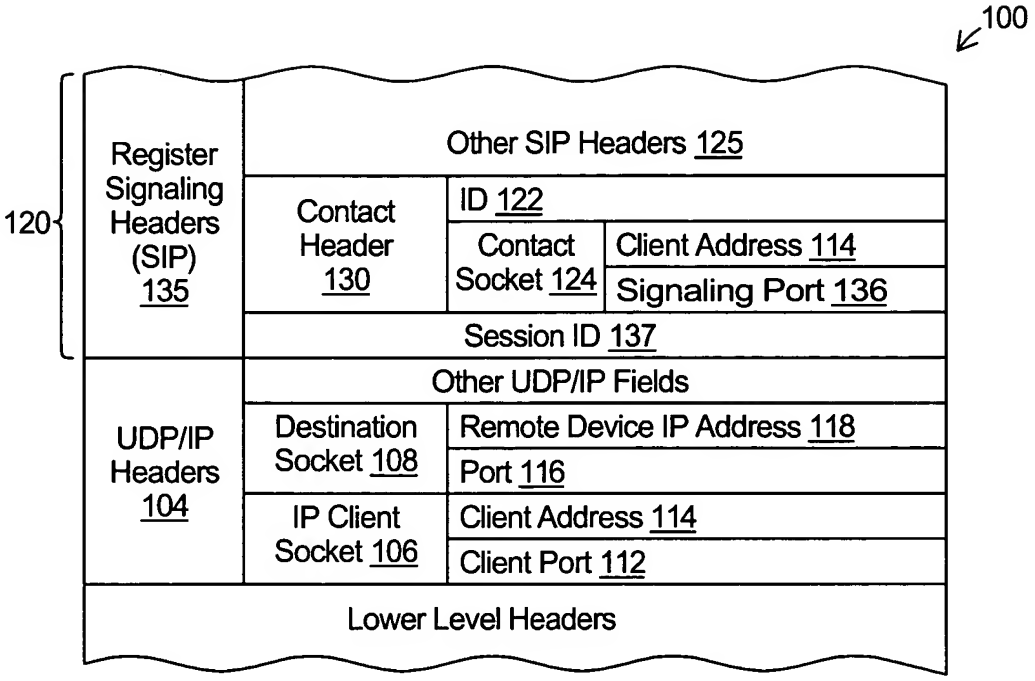

Figure 9a

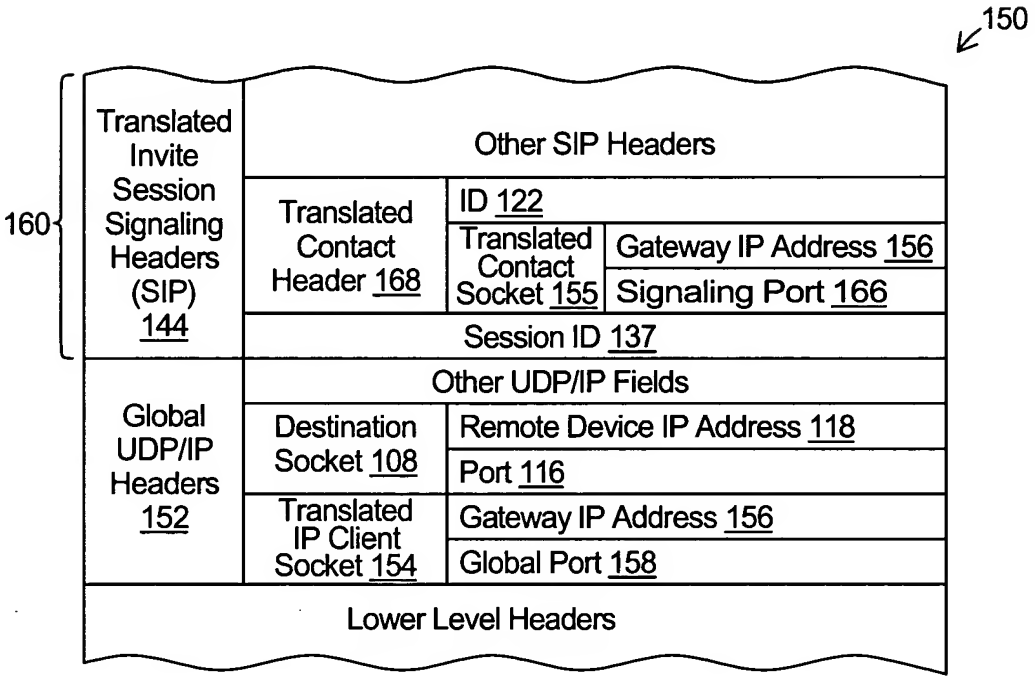

Figure 9b

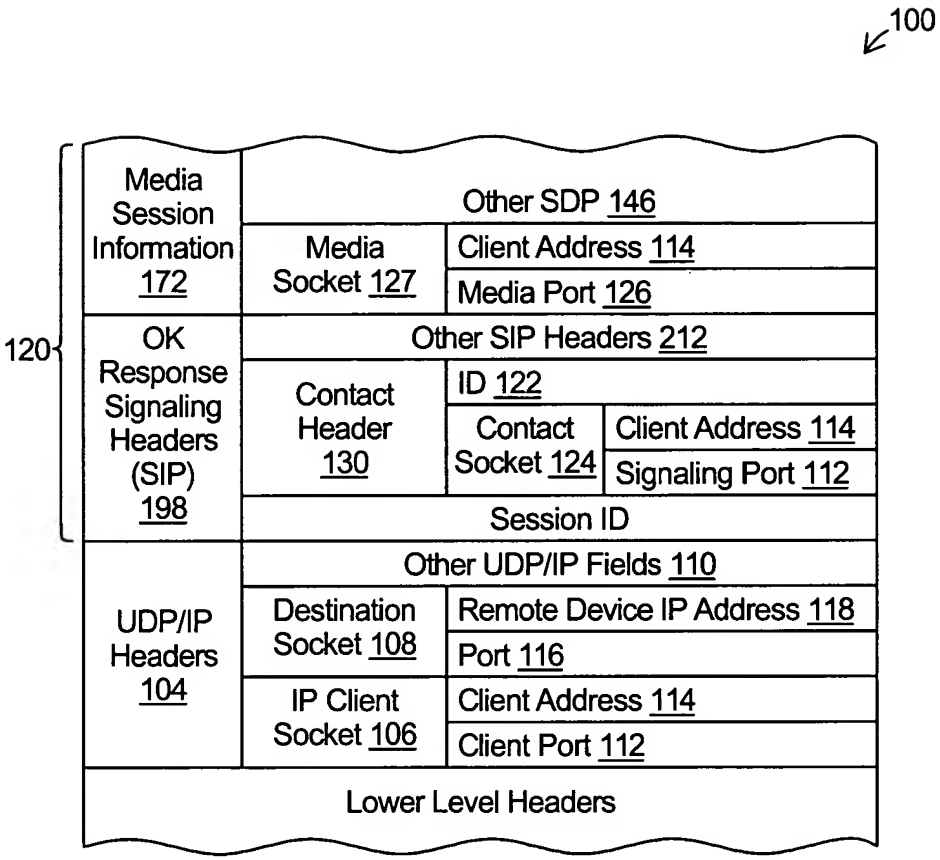
100
120
Media Session Information 172
Other SDP 146
Media Socket 127
Client Address 114
Media Port 126
OK Response Signaling Headers (SIP) 198
Other SIP Headers 212
Contact Header 130
ID 122
Contact Socket 124
Client Address 114
Signaling Port 112
Session ID
UDP/IP Headers 104
Other UDP/IP Fields 110
Destination Socket 108
Remote Device IP Address 118
Port 116
IP Client Socket 106
Client Address 114
Client Port 112
Lower Level Headers

Figure 10a

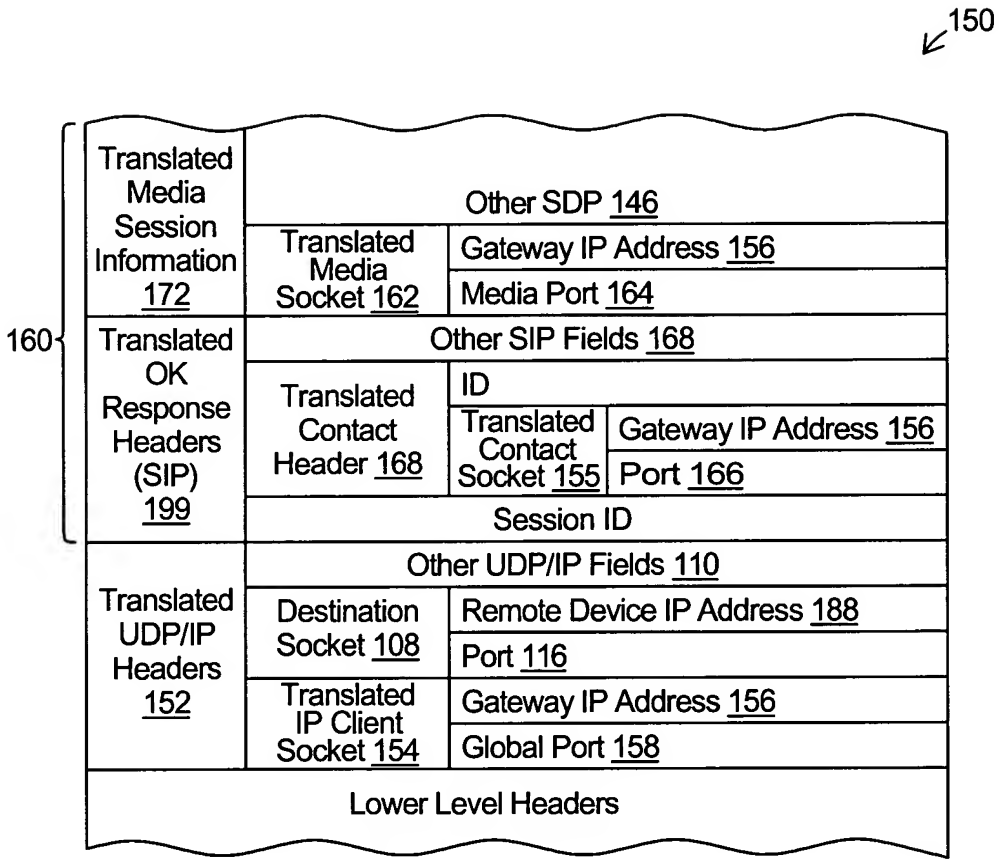
150
160
Translated Media Session Information 172
Other SDP 146
Translated Media Socket 162
Gateway IP Address 156
Media Port 164
Translated OK Response Headers (SIP) 199
Other SIP Fields 168
Translated Contact Header 168
ID
Translated Contact Socket 155
Gateway IP Address 156
Port 166
Session ID
Translated UDP/IP Headers 152
Other UDP/IP Fields 110
Destination Socket 108
Remote Device IP Address 188
Port 116
Translated IP Client Socket 154
Gateway IP Address 156
Global Port 158
Lower Level Headers

Figure 10b